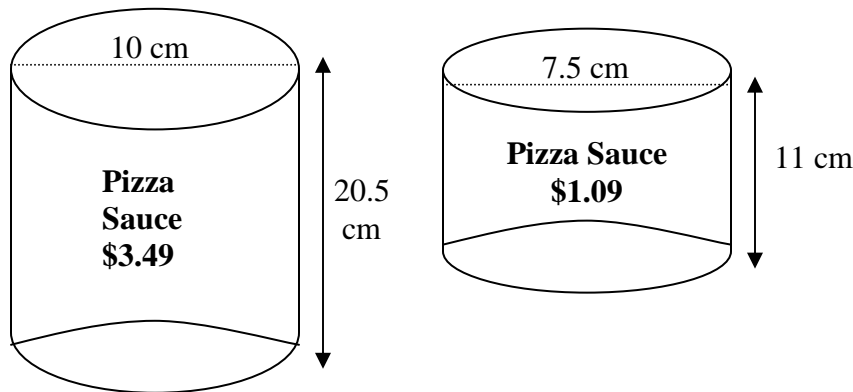
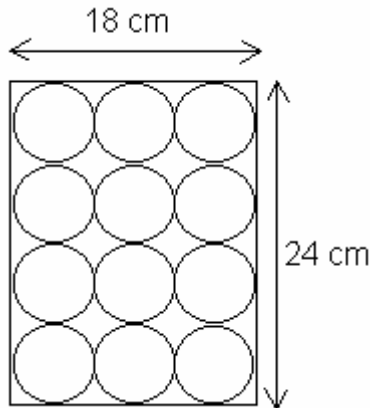


**Surface Area & Volume Word Problems Assignment**

1. If both of the pizza sauce cans shown below are cylinders, which is the better buy? Justify your answer.



2. Cans of soup are often packed in boxes as shown in the diagram below. How much area is wasted in between all the cans?



3. How much cat food would fit into an optimized can that has a height of 14.5 cm? How much paper is needed to make the label?
4. Three identical tennis balls with an 8 cm diameter are stacked inside a cylindrical container. Calculate the amount of air in the container and the amount of advertising space on the lateral side of the container.
5. A ramp shaped like a triangular prism is 2.5 meters wide, and reaches a loading dock 1.2 meters high. The ramp starts 3 meters from the dock. All visible sides of the ramp are to be covered with pressure-treated plywood. You only have \$51 to build the ramp. Which plywood should you use?

Wood	Cost per m <sup>2</sup>	Delivery charge
Red wood	3.01	8.85
Purple wood	3.10	8.05
Blue wood	2.98	12.05
Yellow wood	3.03	6.15

6. A birthday gift is 55 cm, 40 cm wide, and 5 cm high. The sheet of paper you want to use to wrap it measures 75 cm by 100 cm. Is the paper large enough to wrap the gift? Justify your answer.